CLAIMS

1. Method for sharing internal excess bandwidth between output termination modules and input termination modules of a switching network including a switch core fabric (FC) by means of which a plurality of N input termination modules (ITM1 to ITMn) communicate with a plurality of M output termination modules (OTM1 to OTMm) through at least point-to-point transmission means considered as corresponding each to a virtual ingress-to-egress pipe (VIEP), excess bandwidth sharing being realized for the bandwidth remaining available after bandwidth reservation for traffic with guaranteed bandwidth, sharing of such a remaining bandwidth being obtained by means of successive steps including at least a minimum bandwidth request (MBR) calculation step by a determined input termination module for an ingress-to-egress pipe by which it is point-to-point linked to a determined output termination module, said minimum bandwidth request being transmitted to the determined output termination module for obtaining a minimum bandwidth grant (MBG) in return from this output termination module, **characterized** in that the minimum bandwidth request and grant related to an input termination module linked by an ingress-to-egress pipe to an output termination module are both calculated for a determined number K of relative administrative weights corresponding each to a different quality of service, with a different request and a corresponding grant for every weight.

2. Switching network including a switch core fabric (FC) by means of which a plurality of N input termination modules (ITM1 to ITMn) communicate with a plurality of M output termination modules (OTM1 to OTMm) through at least point-to-point transmission means considered as corresponding each to a virtual ingress-to-egress pipe (VIEP), said switching network including means for sharing a bandwidth which is available at the level of the switch core fabric among input termination modules according to requests of said input termination modules and to the traffic possibilities at the level of output termination modules in relation with a present traffic situation, said switching

network including bandwidth reservation means for traffic with guaranteed bandwidth, said means for sharing the available bandwidth including means for sharing excess bandwidth remaining available after bandwidth reservation for said traffic with guaranteed bandwidth, according to successive steps including at least a minimum bandwidth request calculation step by a determined input termination module for an ingress-to-egress pipe by which it is point-to-point linked to a determined output termination module, said minimum bandwidth request being transmitted to the determined output termination module for obtaining a minimum bandwidth grant in return from this output termination module, said means for sharing excess bandwidth being **characterized** in that they comprise means for calculating minimum bandwidth requests and grants related to an input termination module linked by an ingress-to-egress pipe to an output termination module, for a determined number K of relative administrative weights corresponding each to a different quality of service, with a request and a grant calculated for each weight.

3. A communication network **characterized** in that it comprises at least one switching network according to claim 2.